

Please enter the examiner's Amendment
as shown. Thanks. Ro 3/1/05

Application/Control Number: 10/730,541

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Art Unit: 2837

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, page 19, after line 11, insert the following sentences:

"FIGURE 8 is a perspective view of a current measurement arrangement for the winding of a transformer.

FIGURE 9 is a perspective view of a current measurement arrangement for the winding."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bentsu Ro whose telephone number is 571 272-2072.

The examiner can normally be reached on WS08605.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

off-board shunting arrangement including a portion of a bus bar;

FIGURE 5 is a simplified representation of the characteristics of a particular type of non-contacting current sensor, illustrating its limiting characteristic;

FIGURE 6 is a simplified illustration of a machine with plural phase windings on the stator, and their connection according to an aspect of the invention; and

FIGURE 7 is a simplified illustration similar to FIGURE 6, showing a possible location for the current sensor near a lug to which the conductors of a winding attach.

Ins. R

Description of the Invention

[0030] In FIGURE 6, the machine (motor or generator) is designated 616, and may be viewed (with one exception) as being equivalent to motor 16 of FIGURE 1. Within machine 616, a plurality of stator windings are illustrated by a first stator winding 610 and a second stator winding 612. Stator winding 610 may be associated with an A phase of current or voltage, and stator winding 612 may be associated with a C phase. Other phases may be associated with other windings (not illustrated). Under appropriate conditions, the windings 610 and 612 may be rotor windings instead of stator windings. The salient difference between machine 616 of FIGURE 6 and machine 16 of FIGURE 1 is that the current sensing (performed by C of FIGURE 1) is instead performed on the actual windings of the machine, rather than on external connections.

[0031] A motor or generator machine is often wound with several small gauge wires in parallel, for ease of winding, since several small wires bend more easily than a